

ABSTRACT OF THE DISCLOSURE

[0073] A method and apparatus for producing depolarized light that is useful in forming interrogation signals for an optical sensor array and demodulator having reduced polarization-induced fading and phase noise. The depolarized light is produced by splitting a light beam, delaying a first orthogonal component of the light beam with respect to a second orthogonal component of the light beam using a predefined delay, while maintaining the polarization of the first orthogonal component and the polarization of the second orthogonal component. The delayed light beams are combined to produce a depolarized light beam by selecting a predefined delay that causes an interference signal having a delay equal to the predefined delay to be suppressed during a demodulation process.